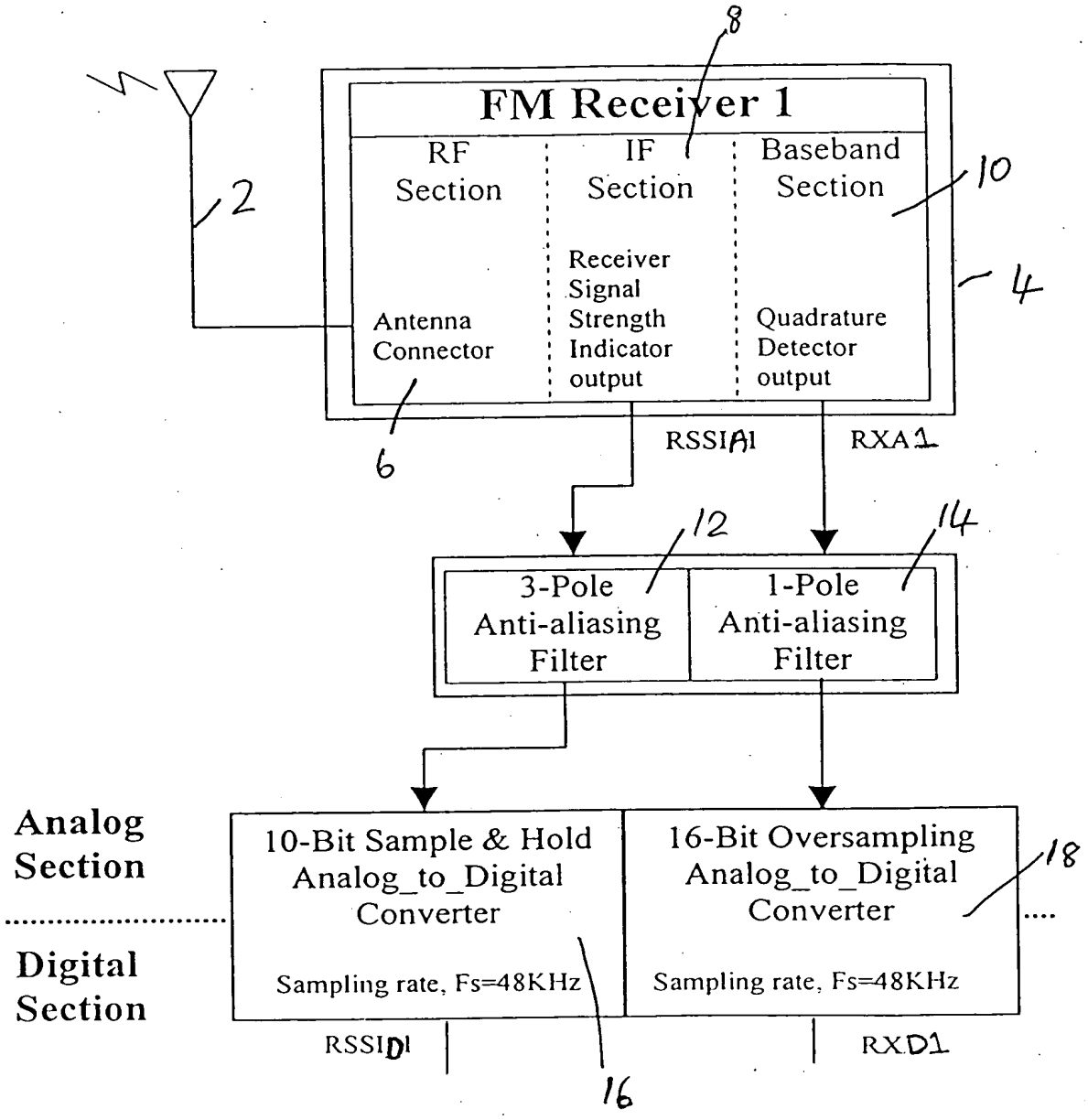
FM Receiver 1
RF Section
IF Section
Baseband Section
Antenna Connector
Receiver Signal Strength Indicator output
Quadrature Detector output
RSSIA1
RXA1
3-Pole Anti-aliasing Filter
1-Pole Anti-aliasing Filter
Analog Section
Digital Section
10-Bit Sample & Hold Analog_to_Digital Converter
Sampling rate, Fs=48KHz
16-Bit Oversampling Analog_to_Digital Converter
Sampling rate, Fs=48KHz
RSSID1
RXD1
2
4
6
8
10
12
14
16
18

Fig. 1

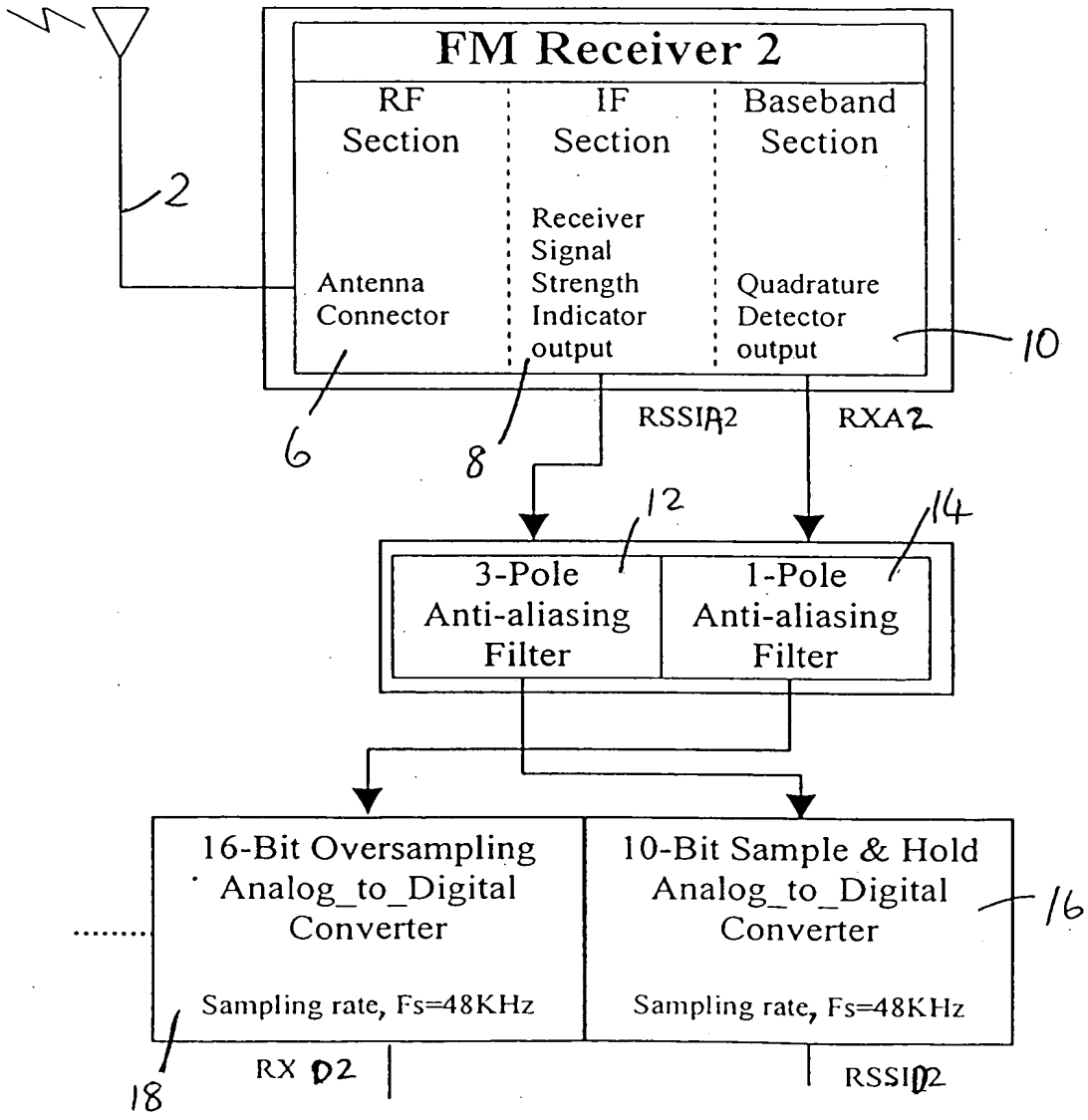
FM Receiver 2
RF Section
IF Section
Baseband Section
Receiver Signal Strength Indicator output
Antenna Connector
Quadrature Detector output
2
6
8
10
RSSIA2
RXA2
12
14
3-Pole Anti-aliasing Filter
1-Pole Anti-aliasing Filter
16-Bit Oversampling Analog_to_Digital Converter
10-Bit Sample & Hold Analog_to_Digital Converter
16
Sampling rate, Fs=48KHz
Sampling rate, Fs=48KHz
18
RX D2
RSSID2

Fig. 2

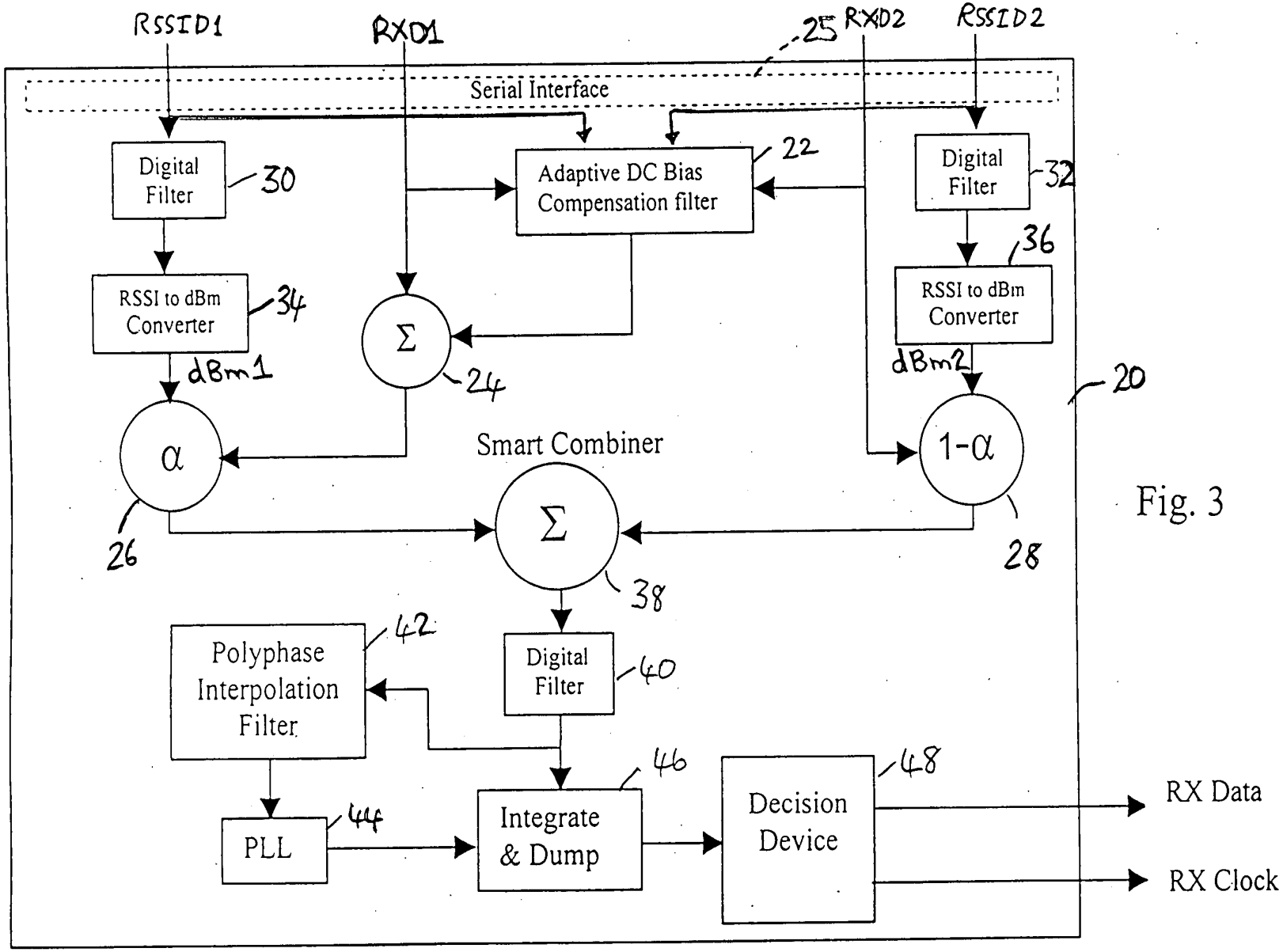
RSSID1
RXD1
25
RXD2
RSSID2
Serial Interface
Digital Filter
30
Adaptive DC Bias Compensation filter
22
Digital Filter
32
RSSI to dBm Converter
34
Σ
24
dBm1
36
RSSI to dBm Converter
dBm2
20
α
Smart Combiner
1-α
26
Σ
28
38
Polyphase Interpolation Filter
42
Digital Filter
40
46
48
PLL
44
Integrate & Dump
Decision Device
RX Data
RX Clock

Fig. 3

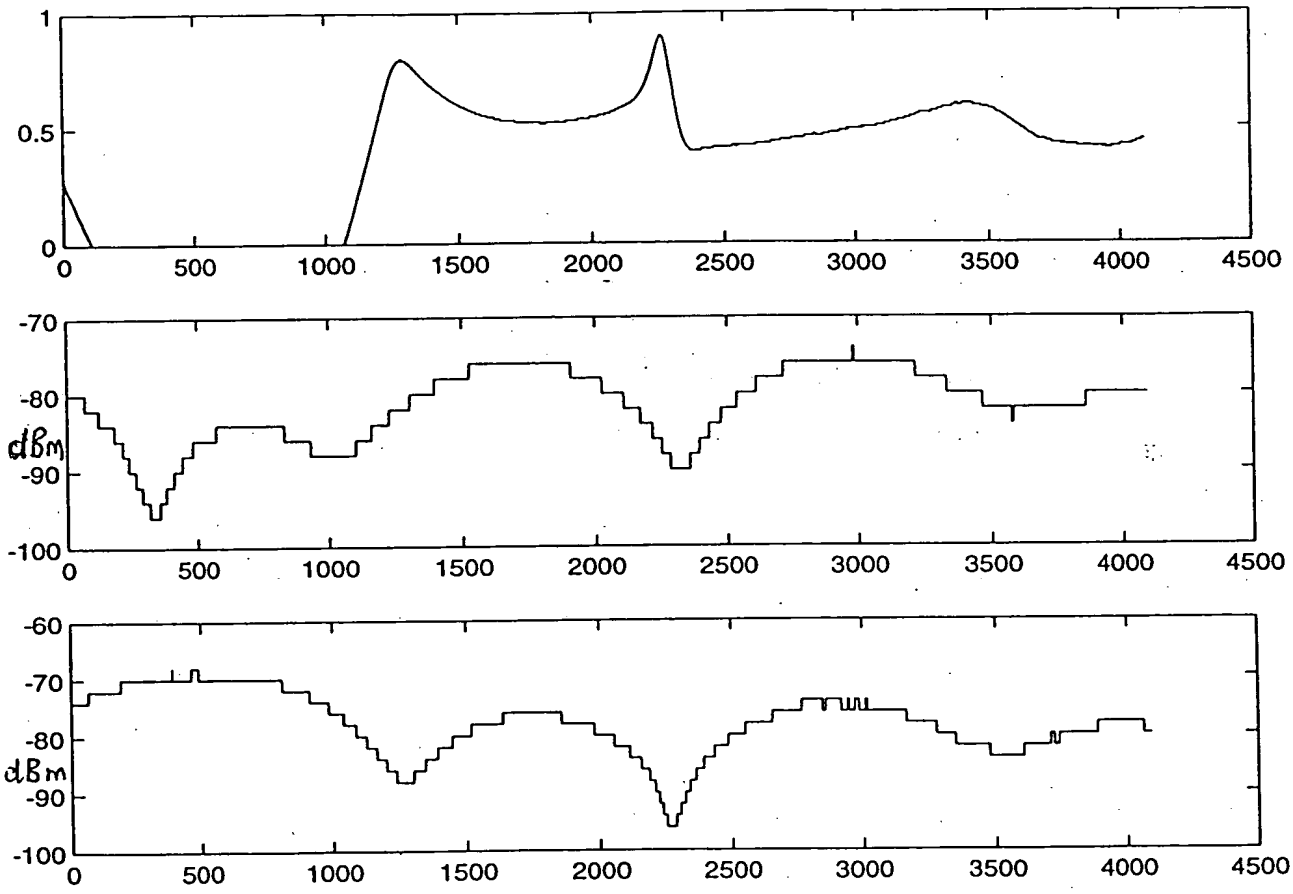
1
0.5
0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
-70
-80
dBm
-90
-100
0
500
1000
1500
2000
2500
3000
3500
4000
4500
-60
-70
-80
dBm
-90
-100
0
500
1000
1500
2000
2500
3000
3500
4000
4500

FIG 4